SMART CITIES GUIDANCE NOTE

Smart Urban Development

May 2018

SmartCitiesCouncil®
Australia New Zealand

Liveability
Workability
Sustainability

About us

Smart Cities Council Australia New Zealand (SCCANZ) is part of the Smart Cities Council, the world's largest network of smart cities companies, practitioners and policy makers, embracing technology, data and intelligent design to accelerate liveability, workability and sustainability in our cities and towns.

Further information about the Smart Cities Council can be found here.

SCCANZ invites comments and discussion around the contents of this document, and encourages written comments to adam.beck@anz.smartcitiescouncil.com.

Acknowledgements

Introduction

For well over a decade urban development in Australia, New Zealand and other parts of the world has pursued an agenda of sustainability. The goal has been to shape our urban development practices so they can be better - for people, planet and economy.

In 2010, the Green Building Council of Australia (GBCA) laid the foundations for one of the most influential pieces of work in sustainable urban development in Australia with the release of the Green Star Communities National Framework.

In this document, the scope of a sustainable communities was identified, based on a collaborative engagement process with government, industry and academia. In it, the following was articulated:

A sustainable community embodies the principles of sustainable development, respecting ecological limits and natural resource constraints, encouraging prosperity and well-being while optimising conditions for human development.

The purpose of this guidance note, for smart urban development, is to provide further guidance to the development industry on how smart technologies and data solutions can not only support sustainable urban development, but strengthen and accelerate it's stated outcomes.

This guidance note has been created to provide a clear definition of smart urban development, and offer a scope for policy makers, practitioners and developers to guide their work.

The information within this note was gathered over a 12 month period of consultation and research by SCCANZ and its partners as part of the development of the Code for Smart Communities.

As a more detailed guidance resource, the Code will extend beyond the information contained within this guidance note, and include metrics and resources for the planning, design and construction of development projects.

The Code for Smart Communities is due for release by mid 2018.

What is smart urban development?

Without definition, anything could be success. Without this guidance note, any community could be defined as a smart community.

This is why this Guidance Note is so important. It provides a definition, scope and guidance on smart urban development. Without which, we cannot make the greatest impact possible in shaping the communities of the future.

But how do we define smart urban development?

Put simply:

Smart urban development is development that uses technology, data and intelligent design to enhance the community's liveability, workability and sustainability.

And why smart urban development?

We are of the view that neighbourhoods, precincts and districts are the building blocks of cities. If these 'communities' are smart, and sustainable, only then can we have smart and sustainable cities.

Therefore, for the purposes of this guidance note, the term 'community' applies to at-scale development projects in greenfield and brownfield areas, along with campus and other institutional uses.

The principles of smart urban development?

Before we start, the fundamentals

Smart urban development starts with a commitment to ensuring the conditions for success are established, and that any investments in smart communities strategies are as impactful as possible, and contribute to greater liveability, workability and sustainability.

COLLABORATION   **SUSTAINABILITY**   **PLACE**

Smart urban development can only succeed with the following foundations:

1. A commitment to collaboration, whereby engagement is built on trust, stakeholders learn to let go, share power and embrace diversity.

2. A commitment to achieving a minimum 4 Star Green Star rating against the Green Star Communities rating system.

3. A demonstrated alignment with the principles and attributes contained with the Australian Urban Design Protocol.

Smart urban development is guided by a strategy that clearly identifies how investments in technology and data solutions will be made in order to accelerate liveability, workability and sustainability outcomes.

This means that the project:

- Is guided by a set of values and outcomes that drive decision making and investment focused on sustainability outcomes.

- Is deeply connected across systems, stakeholders and processes for delivery of services.

- Views technology and data solutions as a key enabler and accelerator for the projects vision.

- Embraces actions that can be articulated, delivered, managed, measured, reported and evaluated.
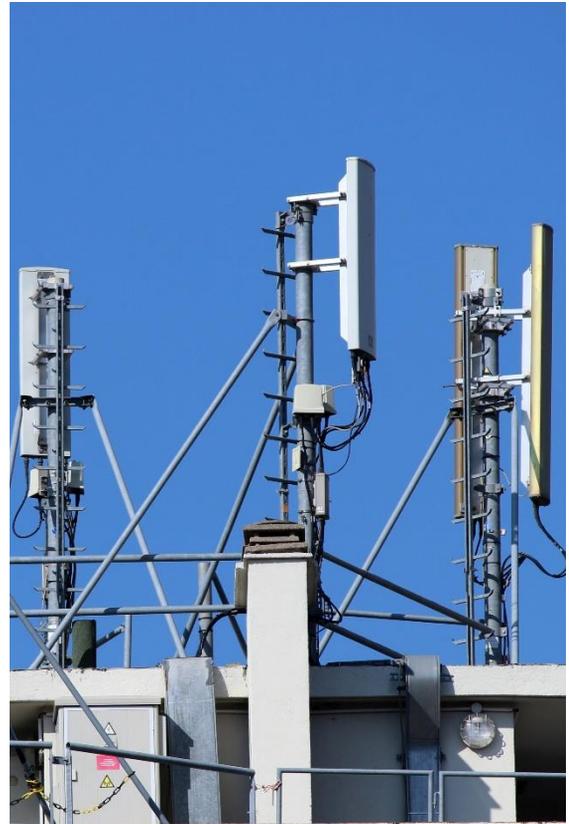

1. STRATEGIC

Alignment with this principle could be demonstrated through a number of actions, including applying the following British Standards Institution documents to the creation of your smart cities strategy:

- PAS 181 - Guide to establishing strategies for smart cities and communities
- PD 8101 - Smart cities – Guide to the role of the planning and development process

Smart urban development has access to high speed and ubiquitous connectivity while maintaining the interoperability of connected devices.

This means that the project:

- Has a precinct-wide (public domain) area infrastructure services network, including as a minimum telecommunications, lighting, clean energy, water and security system.

- Uses sensors to gather data on the conditions within and around the community.

- Embeds interoperability standards from the early design phase, to support multiple types of technologies.

- Maintains the highest level of data security for connected devices.

2. CONNECTED

Alignment with this principle could be demonstrated through a number of actions, including applying the following guidance documents to the design and installation of the services network and connected devices:

- ISO/IEC - 14763-2 Information technology implementation and operation of customers premises cabling. Planning and installation.
- Internet of Things Alliance Australia Security Guideline V1.2
- British Standards Institution PAS 212:2016 Automatic resource discovery for the Internet of Things. Specification.

Smart urban development invests in the collection, integration, analytics and communication of data as a basis for building awareness, insights and optimisation of its services and performance.

This means that the project:

- Builds a 'data culture' across the various stakeholder groups and sectors, including the community.

- Has an open data platform, with supporting data governance framework.

- Has provision for the design of and access to adequate data storage.

- makes data privacy a core priority.
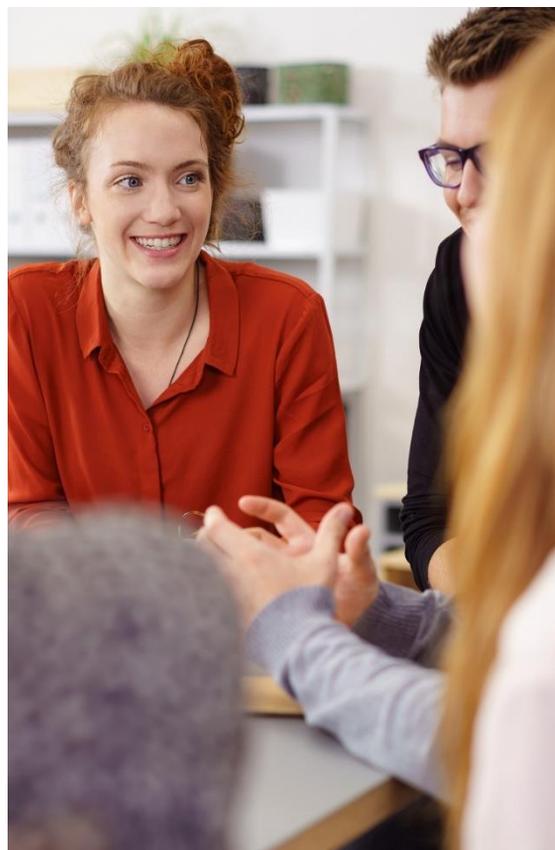

3. AWARE

Alignment with this principle could be demonstrated through a number of actions, including applying the following:

- Smart Cities Council Open Data Guide.
- ISO/IEC 30182:2017 - Smart city concept model --Guidance for establishing a model for data interoperability.
- ISO 27001 – Information security management systems. Requirements.

Smart urban development supports a culture of ongoing positive change afforded through the insights and intelligence gathered from data.

This means that the project:

- Embraces collaborative governance models which build shared ownership and responsibility across decision-making processes.

- Is able to use integrated and automated responses.

- Can be flexible, proactive and preventative in its approach to decision making.

- Embraces a continual improvement culture by using feedback loops.

- Is performance-driven, using ccommunity performance dashboards that display smart community insights.
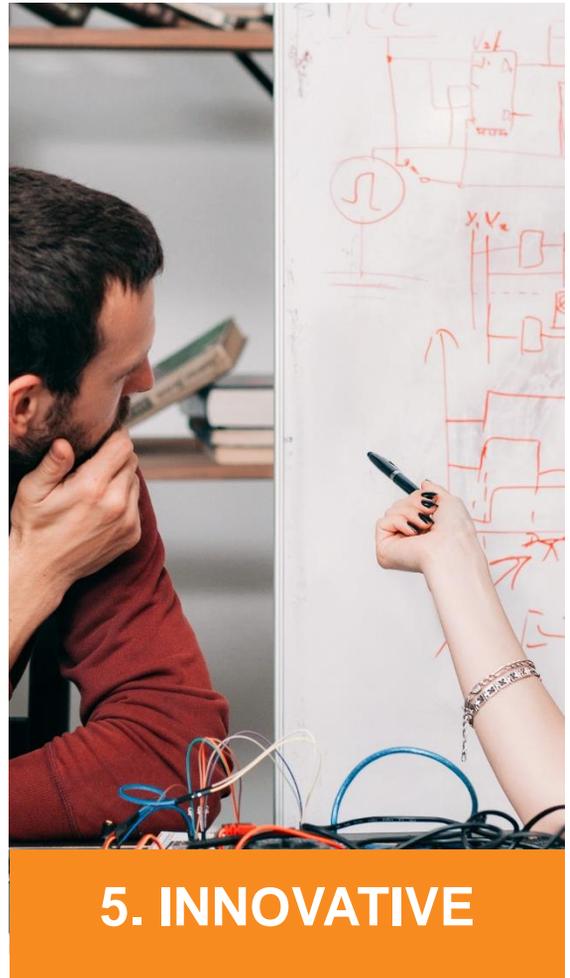

4. RESPONSIVE

Alignment with this principle could be demonstrated by advancement against suitable metrics, including:

- Percentage of population engaged through digital channels (eg. API's, kiosks, wi-fi, registered user hits).
- Number of or potential realised value of improvement initiatives driven by data.
- Number of documented changes in human behaviour attributed to published data (eg. Reduction in energy and water consumption, increase in tree plantings, increase in physical exercise).

Smart urban development builds a culture of creativity, equity and agility to help advance opportunities for innovation.

This means that the project:

- Embraces disruption and thrives on the excitement of solving challenges.

- Expresses the behaviour and practice of deep collaboration among diverse stakeholders.

- Is underpinned by open and sharing platforms and practices.

- Builds a knowledge workforce.

- Nurtures the start-up economy, by providing opportunities to bring people together through co-working spaces, incubators and accelerators.

- Has a clear goal to scale its impact.

5. INNOVATIVE

Alignment with this principle could be demonstrated by advancement against suitable metrics, including:

- Number of start-ups established.
- Number of start-ups who have scaled internationally.
- Evidence of investment creation pathways.
- evidence of an open innovation platform.

We thrive on feedback, and would welcome your comments to help make this work as impactful as possible. Please contact us at anytime.

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